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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,892	03/27/2002	Kyosti Ranto	442-010765-US(PAR)	7832

2512	7590	09/06/2006		

EXAMINER
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ART UNIT	PAPER NUMBER
2194	

DATE MAILED: 09/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/019,892	RANTO ET AL.
	Examiner	Art Unit	
	Nathan Price	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>16 June 2006</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,5-12 and 15-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,2,5-12 and 15-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>16 June 2006</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1, 2, 5 – 12 and 15 – 20 are pending. Claims 3, 4, 13 and 14 have been

cancelled.

Response to Arguments

2.   Applicant's arguments with respect to claims 1 – 20 have been considered but

are moot in view of the new ground(s) of rejection. Objections and rejections in the

previous Office Action that do not appear in this Office Action have been withdrawn.

Priority

3.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file. However, page 5 of the certified copy of

the foreign patent documents is not present in the electronic file. At this time it is

unclear if the missing page was lost or never received. Examiner would appreciate

receiving another copy of the document in order to complete the record. Examiner

acknowledges Applicant's indication in REMARKS received on 16 June 2006 that an

attempt is being made to obtain another copy.

Drawings

4.   The drawings filed on 16 June 2006 are acceptable subject to correction of the

informalities indicated on the attached "Notice of Draftsperson's Patent Drawing

Review," PTO-948. In order to avoid abandonment of this application, correction is

required in reply to the Office action. The correction will not be held in abeyance.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

6.   Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claim 16 is dependent on claim 14, which is currently

cancelled. It is believed that Applicant intended to make claim 16 dependent on claim

15 and the claim has been treated as such for the remainder of this Office Action.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1, 2, 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Widegren et al. (US 6,374,112 B1) in view of Szabó et al. (US

6,567,425 B1) and Coulouris (Coulouris, George, Jean Dollimore and Tim Kindberg.

"Distributed Systems Concepts and Design." Second Edition, Addison-Wesley; 1994;

pages 165-178.).

9.   As to claim 1, Widegren et al. disclose a method of managing bearer services,

each bearer service being used at a server for communication with a terminal over a

particular wireless network (Fig. 1), the method comprising:

        dynamically adding a bearer service to the server while the server is able to

communicate with already existing bearer services (col. 3 lines 22 – 24).

10.   Widegren et al. fail to specifically disclose the addition of bearer adapters or

threads. However, Szabó et al. disclose the use of multiple bearer services using

bearer adapters (col. 2 lines 42 – 51; col. 5 lines 20 – 33); and creating the adapter at a

protocol stack in the server (col. 2 lines 34 – 51; col. 5 lines 20 – 33; the BAP is in the

AAL2). It would have been obvious to one of ordinary skill in the art at the time of

Applicant's invention to combine these references because Widegren et al. disclose the

use of multiple bearer services (col. 3 lines 22 – 43) and Szabó et al. disclose multiple

bearer adapters for providing compatibility with multiple bearer services (col. 5 lines 20

– 33).

11.   Widegren et al. and Szabó et al. do not specifically state that the adapters are

created on threads. However, threads are well known and disclosed by Coulouris (page

165 ¶ 3). It would have been obvious to one of ordinary skill in the art at the time

Applicant's invention was made to create a particular thread to which the added bearer

adapter is assigned to maximize concurrent execution as described in Coulouris (page

165 ¶ 3).

12.   As to claim 2, the method according to claim 1 is rejected for the reasons above.

Continuing to use the modification of Widegren et al. to include bearer adapters,

Widegren et al. also disclose that the method further comprises:

    dynamically deleting a bearer adapter from the server while the server is able to

communicate with existing bearer adapters (col. 3 lines 22 – 32).

13.   As to claim 5, the method according to claim 1 is rejected for the reasons above.

Widegren et al. also disclose the method further comprising:

    transferring data between a protocol stack and the bearer adapter via a bearer

gate (col. 2 lines 61 – 64; col. 13 lines 43 – 60; Fig. 7), and

    upon creating the bearer adapter, storing identification information about the

bearer adapter in the bearer gate (col. 9 lines 29 – 32).

14.   Widegren et al. fail to specifically disclose that upon deleting the bearer adapter,

the particular bearer adapter identification information is removed from the bearer gate.

However, Widegren et al. disclose that bearers may be released (col. 3 lines 22 – 24),

which at least implies that the identification information does not remain in the bearer

gate in such a way as to falsely indicate that the bearer is still available. One of

ordinary skill in the art at the time of Applicant's invention would have realized that it is

important to be able to remove identification information of bearers, because if the

bearer no longer exists as a result of being released, it could be problematic to maintain

the identification information as if the bearer remained in existence.

15.   As to claim 7, the method according to claim 1 is rejected for the reasons above.

Widegren et al. also disclose that the method further comprises:

controlling the operation of bearer adapters with a user interface (col. 6 lines 1 –

6).

16.   As to claim 8, the method according to claim 7 is rejected for the reasons above.

Widegren et al. also disclose that the controlling comprises adding, removing, starting,

stopping, configuring (col. 6 lines 30 – 33) and monitoring (col. 4 lines 25 – 34) the

operation of bearer adapters. It is necessary to be able to start and stop in order to

provide control and management tasks. See also Szabó et al. col. 6 lines 6 – 7.

17.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren

et al., Szabó et al. and Coulouris as applied to claim 5 above, and further in view of

Anderson et al. (Anderson et al. "Scheduler Activations: Effective Kernel Support for the

User-Level Management of Parallelism." ACM Transactions on Computer Systems, Vol.

10, No. 1, February 1992, Pages 53 – 79).

18.   As to claim 6, Widegren et al. fail to specifically disclose upon deletion of the

identification information about the bearer adapter, keeping the particular thread

assigned to the bearer adapter until the next time the operation of the server is stopped.

However, Anderson et al. disclose keeping and reusing threads in order to reduce

overhead (page 69 ¶ 4). It would have been obvious to one of ordinary skill in the art at

the time of Applicant's invention to apply the disclosure of Anderson et al. to that of

Widegren et al. because establishing and releasing bearer services requires the

allocation and release of resources, which creates overhead. One of ordinary skill in

the art would realize that the reuse of allocated resources for scheduler activations and

kernel threads is similar to reuse of bearer service threads and applying this reference

would reduce overhead for this application of threads.

19.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren

et al. and Szabó et al. and Coulouris as applied to claim 7 above, and further in view of

Chari (US 6,151,023).

20.   As to claim 9, Widegren et al. fail to specifically disclose controlling the operation

of bearer adapters with a graphical window based user interface. However, Chari

discloses the use of a graphical window based user interface (col. 6 lines 51 – 67). It

would have been obvious to one of ordinary skill in the art at the time of Applicant's

invention to combine these references because Widegren et al. disclose monitoring and

controlling bearer services in a network using an interface and Chari discloses the

monitoring and controlling of a network.

21.   Claims 11, 15, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Widegren et al. in view of Szabó et al. and Coulouris (Coulouris,

George, Jean Dollimore and Tim Kindberg. "Distributed Systems Concepts and

Design." Second Edition, Addison-Wesley; 1994; pages 165-178.).

22.   As to claim 11, Widegren et al. disclose a server for managing bearer adapters,

each bearer adapter being used at a server for communication with a terminal over a

particular wireless network (col. 9 lines 33 – 40), the server comprising:

        means for dynamically adding a bearer adapter to the server while the server is

able to communicate with already existing bearer adapters (col. 3 lines 22 – 24);

        a wireless protocol stack for implementing a wireless protocol and for transferring

data (Fig. 1: wireless communication; col. 13 lines 44 – 52); and

        a bearer gate for isolating the wireless protocol stack from the bearer adapter

and for storing information on each bearer adapter (col. 2 lines 61 – 64; col. 9 lines 29 –

32; col. 13 lines 43 – 60; Fig. 7).

23.   Widegren et al. fail to specifically disclose the addition of bearer adapters or

creating threads. However, Szabó et al. disclose the use of multiple bearer services

using bearer adapters (col. 2 lines 42 – 51; col. 5 lines 20 – 33); and creating the

adapter at a protocol stack in the server (col. 2 lines 34 – 51; col. 5 lines 20 – 33; the

BAP is in the AAL2). It would have been obvious to one of ordinary skill in the art at the

time of Applicant's invention to combine these references because Widegren et al.

disclose the use of multiple bearer services (col. 3 lines 22 – 43) and Szabó et al.

disclose multiple bearer adapters for providing compatibility with multiple bearer

services (col. 5 lines 20 – 33).

24.   Widegren et al. and Szabó et al. do not specifically state that the adapters are

created on threads. However, threads are well known and disclosed by Coulouris (page

165 ¶ 3). It would have been obvious to one of ordinary skill in the art at the time

Applicant's invention was made to create a thread to which the added bearer adapter is

assigned to maximize concurrent execution as described in Coulouris (page 165 ¶ 3).

25.   As to claim 15, the server according to claim 11 is rejected for the reasons

above. Widegren et al. also disclose that the server further comprises:

        removing means for dynamically removing a bearer adapter from the server while

the server is able to communicate with still existing bearer adapters (col. 3 lines 23 – 24;

User Interface: col. 6 lines 1 – 6; Bearer Gate: col. 6 lines 20 – 21; Bearer Manager: col.

6 lines 1 – 6).

26.   As to claim 16, the server according to claim 15 is rejected for the reasons

above. Widegren et al. also discloses that:

the removing means have been arranged to remove the identification information

about the bearer adapter from the bearer gate (col. 3 lines 22 – 24); and

the bearer gate has been arranged to stop communication to the removed

adapter (col. 3 lines 22 – 24). See the rejection of claim 5 for more explanation.

27.   As to claim 18, the server according to claim 11 is rejected for the reasons

above. Widegren et al. also disclose that the server comprises a gateway server

serving a plurality of mobile terminals (Figure 1).

28.   Claim 20 is a computer program product corresponding to claim 11 and is

therefore rejected for the same reasons as claim 11.

29.   Claims 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Widegren et al. in view of Szabó et al. and Coulouris as applied to claim 11 above,

and further in view of Chari et al.

30.   As to claim 12, the server according to claim 11 is rejected for the reasons

above. Widegren et al. fail to specifically disclose a means (user interface, keyboard

and display) for allowing an administrator of the server to dynamically add a bearer

adapter while the server is able to communicate with already existing bearer adapters.

However, Chari discloses the use of a user interface, keyboard and display to control

operational parameters (col. 16 lines 55 – 59). It would have been obvious to one of

ordinary skill in the art at the time of Applicant's invention to combine these references

because Widegren et al. disclose monitoring and controlling bearer services in a

network using an interface and Chari discloses the monitoring and controlling of a

network.

31.   As to claim 17, see the rejection of claims 9 and 12.

32.   Claims 10 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over

Widegren et al. in view of Szabó et al. and Coulouris as applied to claims 1 and 18

above, and further in view of Buchholz et al. (US Pat. 6,088,340).

33.   As to claim 10, the method according to claim 1 is rejected for the reasons

above. Widegren et al. also disclose that the terminals comprise mobile terminals and

cellular telephones (Figure 1; Abstract). Widegren fails to specifically disclose the

Wireless Application Protocol (WAP). However, Buchholz et al. disclose WAP (col. 1

lines 39 – 48). It would have been obvious to one of ordinary skill in the art at the time

Applicant's invention was made to combine these references because Buchholz et al.

disclose that WAP is an existing technology for wireless communication.

34.   As to claim 19, the server according to claim 18 is rejected for the reasons

above. Although Widegren et al. fail to specify a WAP gateway, Figure 1 displays a

wireless network. It would have been obvious to one of ordinary skill in the art at the

time of Applicant's invention to use a WAP gateway because WAP was an existing

protocol (see Buchholz et al. col. 1 lines 39 – 48). It would have been obvious to one of

ordinary skill in the art at the time Applicant's invention was made to combine these

references because Buchholz et al. disclose that WAP is an existing technology for

wireless communication.

Conclusion

35.   The prior art made of record on the P.T.O. 892 that has not been relied upon is

considered pertinent to applicant's disclosure. Careful consideration of the cited art is

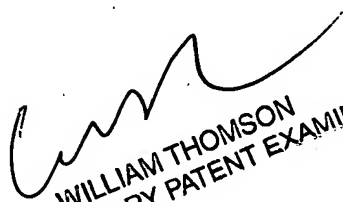required prior to responding to this Office Action, see 37 C.F.R. 1.111(c).

36.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nathan Price whose telephone number is (571) 272-

4196. The examiner can normally be reached on 7:30am - 4:00pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on (571) 272-3718. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

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NP

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER